ISSUED CLAIMS
U.S. Patent No. 6,402,408
Attorney Docket No. 05725.0659-00000
Application filed: July 17, 2000

- 1. A structured composition comprising:
- (a) at least one liquid fatty phase comprising:
- (i) at least one structuring polymer comprising a polyamide skeleton which comprises at least one end group with at least one chain chosen from alkyl chains comprising at least four carbon atoms and alkenyl chains comprising at least four carbon atoms, bonded to the skeleton via at least one ester group; and
- (ii) at least one amphiphilic compound which is liquid at room temperature and which has an HLB value of less than 8.
- 2. A composition according to Claim 1, wherein said at least one ester group is present in a proportion ranging from 10% to 50% of the total number of all said ester groups and all said amide groups of the at least one structuring polymer.
- 3. A composition according to Claim 1, wherein said at least one structuring polymer has a weight-average molecular mass ranging from 1000 to 10,000.
- 4. A composition according to Claim 3, wherein said at least one structuring polymer has a weight-average molecular mass ranging from 2000 to 8000.
- 5. A composition according to Claim 1, wherein said at least one structuring polymer is chosen from at least one polymer of formula (I):

$$R^{1} \longrightarrow O = C \longrightarrow R^{2} \longrightarrow C \longrightarrow N \longrightarrow R^{3} \longrightarrow N \longrightarrow C \longrightarrow R^{2} \longrightarrow C \longrightarrow C \longrightarrow R^{1}$$

$$0 \longrightarrow 0 \longrightarrow 0 \longrightarrow N \longrightarrow R^{3} \longrightarrow N \longrightarrow C \longrightarrow R^{2} \longrightarrow C \longrightarrow R^{1}$$

$$0 \longrightarrow 0 \longrightarrow 0 \longrightarrow N \longrightarrow R^{3} \longrightarrow N \longrightarrow C \longrightarrow R^{2} \longrightarrow C \longrightarrow R^{1} \longrightarrow N \longrightarrow C \longrightarrow R^{1} \longrightarrow N \longrightarrow R^{1} \longrightarrow N \longrightarrow R^{2} \longrightarrow R^{2} \longrightarrow R^{2} \longrightarrow R^{2} \longrightarrow R^{2} \longrightarrow R^{1} \longrightarrow R^{1} \longrightarrow R^{2} \longrightarrow R^$$

in which:

- n is an integer which represents the number of amide units such that the number of ester groups present in said at least one structuring polymer ranges from 10% to 50% of the total number of all said ester groups and all said amide groups comprised in said at least one structuring polymer;
- R¹, which are identical or different, are each chosen from alkyl groups comprising at least 4 carbon atoms and alkenyl groups comprising at least 4 carbon atoms;
- R^2 , which are identical or different, are each chosen from C_4 to C_{42} hydrocarbon-based groups with the proviso that at least 50% of R^2 are chosen from C_{30} to C_{42} hydrocarbon-based groups;
- R³, which are identical or different, are each chosen from organic groups comprising atoms chosen from carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms with the proviso that R³ comprises at least 2 carbon atoms; and
- R⁴, which are identical or different, are each chosen from hydrogen atoms, C₁ to C₁₀ alkyl groups and a direct bond to group chosen from R³ and another R⁴ such that when said at least one group is chosen from another R⁴, the nitrogen atom to which both R³ and R⁴ are bonded forms part of a heterocyclic structure defined in part by R⁴-N-R³, with the proviso that at least 50% of all R⁴ are chosen from hydrogen atoms.

- 6. A composition according to Claim 2, wherein said at least one ester group is present in a proportion ranging from 20% to 35% of the total number of all said ester groups and all said amide groups of the at least one structuring polymer.
- 7. A composition according to Claim 5, wherein said R^1 , which are identical or different, are each chosen from C_{12} to C_{22} alkyl groups.
- 8. A composition according to Claim 7, wherein said R^1 , which are identical or different, are each chosen from C_{16} to C_{22} alkyl groups.
- 9. A composition according to Claim 5, wherein said R^2 , which are identical or different, are each chosen from C_{10} to C_{42} hydrocarbon-based groups.
- 10. A composition according to Claim 5, wherein said R³, which are identical or different, are each chosen from C₂ to C₃₆ hydrocarbon-based groups and polyoxyalkylene groups.
- 11. A composition according to Claim 1, wherein said at least one amphiphilic compound comprises at least one lipophilic part bonded to at least one polar part.
- 12. A composition according to Claim 11, wherein said at least one lipophilic part comprises a carbon-based chain comprising at least 8 carbon atoms.
- 13. A composition according to Claim 12, wherein said at least one lipophilic part comprises from 16 to 32 carbon atoms.
- 14. A composition according to Claim 13, where said at least one lipophilic part comprises from 18 to 28 carbon atoms.
 - 15. A composition according to Claim 11, wherein said at least one polar part is

chosen from compounds derived from alcohols comprising from 1 to 12 hydroxyl groups, polyol groups comprising from 2 to 12 hydroxyl groups, and polyoxyalkylene groups comprising at least 2 oxyalkylene units.

- 16. A composition according to Claim 15, wherein said polyoxyalkylene groups are chosen from polyoxyalkylene groups which comprise from 0 to 20 oxypropylene units and from 0 to 20 oxyethylene units.
- 17. A composition according to Claim 1, wherein said at least one amphiphilic compound is chosen from esters.
- 18. A composition according to Claim 17, wherein said esters are chosen from hydroxystearates of glycerol, oleates of glycerol, isostearates of glycerol, hydroxystearates of sorbitan, oleates of sorbitan, isostearates of sorbitan, hydroxystearates of methylglucose, oleates of methylglucose, isostearates of methylglucose, hydroxystearates of branched C₁₂ to C₂₆ fatty alcohols, oleates of branched C₁₂ to C₂₆ fatty alcohols and isostearates of branched C₁₂ to C₂₆ fatty alcohols.
- 19. A composition according to Claim 18, wherein said branched C_{12} to C_{26} fatty alcohols are chosen from octyldodecanols.
- 20. A composition according to Claim 17, wherein said esters are chosen from monoesters and diesters.
- 21. A composition according to Claim 1, wherein said at least one amphiphilic compound is present in a concentration ranging from 0.1% to 35% by weight of the total weight of said composition.

- 22. A composition according to Claim 21, wherein said at least one amphiphilic compound is present in a concentration ranging from 2% to 15% by weight of the total weight of said composition.
- 23. A composition according to Claim 1, wherein said at least one structuring polymer is present in a concentration ranging from 0.5% to 80% by weight of the total weight of said composition.
- 24. A composition according to Claim 23, wherein said at least one structuring polymer is present in a concentration ranging from 5% to 40% by weight of the total weight of said composition.
- 25. A composition according to Claim 1, wherein said at least one liquid fatty phase comprises greater than 40% by weight of the total weight of said at least one liquid fatty phase of at least one apolar oil.
- 26. A composition according to Claim 25, wherein said at least one liquid fatty phase comprises greater than 50% by weight of the total weight of said at least one liquid fatty phase of at least one apolar oil.
- 27. A composition according to Claim 1, wherein said at least one liquid fatty phase comprises at least one oil.
- 28. A composition according to Claim 27, wherein said at least one oil is chosen hydrocarbon-based oils of mineral origin and hydrocarbon-based oils of synthetic origin.
- 29. A composition according to Claim 1, wherein said at least one liquid fatty phase comprises at least one apolar oil.

- 30. A composition according to Claim 29, wherein said at least one apolar oil is chosen from parleam oil, isoparaffins and squalane.
- 31. A composition according to Claim 1, wherein said at least one liquid fatty phase is present in a concentration ranging from 5% to 99% by weight of the total weight of said composition.
- 32. A composition according to Claim 31, wherein said at least one liquid fatty phase is present in a concentration ranging from 20% to 75% by weight of the total weight of said composition.
- 33. A composition used to care for at least one keratin material, a composition for treating at least one keratin material, or a make-up composition for at least one keratin material comprising:
- (a) at least one liquid fatty phase comprising:
- (i) at least one structuring polymer comprising a polyamide skeleton which comprises at least one end group with at least one chain chosen from alkyl chains comprising at least four carbon atoms and alkenyl chains comprising at least four carbon atoms, bonded to the skeleton via at least one ester group; and
- (ii) at least one amphiphilic compound which is liquid at room temperature and which has an HLB value of less than 8.
 - 34. A composition according to Claim 1, further comprising at least one dyestuff.
- 35. A composition according to Claim 34, wherein said at least one dyestuff is chosen from lipophilic dyes, hydrophilic dyes, pigments and nacres.

- 36. A composition according to Claim 34, wherein said at least one dyestuff is present in a concentration ranging from 0.01% to 40% by weight relative to the total weight of said composition.
- 37. A composition according to Claim 36, wherein said at least one dyestuff is present in a concentration ranging from 5% to 25% by weight relative to the total weight of said composition.
- 38. A composition according to Claim 1, further comprising at least one suitable additive chosen from water optionally thickened or gelled with an aqueous-phase thickener or gelling agent, antioxidants, essential oils, preserving agents, fragrances, neutralizing agents, liposoluble polymers, cosmetically active agents, dermatologically active agents and waxes.
- 39. A composition according to Claim 1, wherein said composition is in a form chosen from a paste, a solid, a cream, an oil-in-water emulsion, a water-in-oil emulsion and an anhydrous gel, optionally translucent or transparent.
- 40. A mascara product, an eyeliner product, a foundation product, a lipstick product, a deodorant product, a make-up product for the body, a make-up-removing product, an eyeshadow product, a face powder product, a concealer product, a treating shampoo product, a hair conditioning product, an antisun product or a care product for the face or the body comprising:
- (a) at least one liquid fatty phase comprising:
- (i) at least one structuring polymer comprising a polyamide skeleton which comprises at least one end group with at least one chain chosen from alkyl chains

comprising at least four carbon atoms and alkenyl chains comprising at least four carbon atoms, bonded to the skeleton via at least one ester group; and

- (ii) at least one amphiphilic compound which is liquid at room temperature and which has an HLB value of less than 8.
 - 41. A composition according to Claim 1, further comprising at least one pigment.
- 42. A composition according to Claim 1, wherein said at least one amphiphilic compound has an HLB value ranging from 1 to 7.
- 43. A composition according to Claim 42, wherein said at least one amphiphilic compound has an HLB value ranging from 1 to 5.
- 44. A composition according to Claim 43, wherein said at least one amphiphilic compound has an HLB value ranging from 3 to 5.
- 45. A structured composition comprising a cosmetically acceptable medium and further comprising:
- (a) at least one liquid fatty phase comprising at least one structuring polymer which comprises a polyamide skeleton comprising at least one end group with at least one chain chosen from alkyl chains comprising at least four carbon atoms and alkenyl chains comprising at least four carbon atoms, bonded to said skeleton via an ester group; and (b) at least one amphiphilic compound which is liquid at room temperature, with an HLB value of less than 8.
- 46. A composition according to Claim 45, wherein said composition is in cast form.

- 47. A composition according to Claim 45, wherein said composition is in the form of a mascara product, an eyeliner product, a foundation product, a lipstick product, a deodorant product, a make-up product for the body, a make-up-removing product, an eyeshadow product, a face powder product, a concealer product, a treating shampoo product, a hair conditioning product, an antisun product or a care product for the face or the body.
- 48. A composition according to Claim 1, wherein said at least one structuring polymer is chosen from polymers resulting from at least one polycondensation reaction between at least one dicarboxylic acid comprising at least 32 carbon atoms and at least one diamine comprising at least 2 carbon atoms.
- 49. A composition according to Claim 48, wherein said at least one dicarboxylic acid comprises from 32 to 44 carbon atoms.
- 50. A composition according to Claim 48, wherein said at least one diamine comprises from 2 to 36 carbon atoms.
- 51. A composition according to Claim 48, wherein said at least one dicarboxylic acid is chosen from dimers of at least one fatty acid comprising at least 16 carbon atoms.
- 52. A composition according to Claim 48, wherein said at least one fatty acid is chosen from oleic acid, linoleic acid and linolenic acid.
- 53. A composition according to Claim 48, wherein said at least one diamine is chosen from ethylenediamine, hexylenediamine, hexamethylenediamine, phenylenediamine and ethylenetriamine.

- 54. A composition according to Claim 48, wherein said at least one structuring polymer is chosen from polymers comprising one or two terminal carboxylic acid groups.
- 55. A composition according to Claim 54, wherein said terminal carboxylic acid groups are esterified with at least one alcohol chosen from monoalcohols comprising at least 4 carbon atoms.
- 56. A composition according to Claim 55, wherein said at least one alcohol is chosen from monoalcohols comprising from 10 to 36 carbon atoms
- 57. A composition according to Claim 56, wherein said at least one alcohol is chosen from monoalcohols comprising from 12 to 24 carbon atoms.
- 58. A composition according to Claim 57, wherein said at least one alcohol is chosen from monoalcohols comprising from 16 to 24 carbon atoms.
- 59. A composition according to Claim 1, wherein said at least one structuring polymer has a softening point of greater than 70°C.
- 60. A composition according to Claim 59, wherein said at least one structuring polymer has a softening point of 70°C to 190°C.
- 61. A composition according to Claim 60, wherein said at least one structuring polymer has a softening point of 80°C to 130°C.
- 62. A composition according to Claim 61, wherein said at least one structuring polymer has a softening point of 80°C to 105°C.

- 63. A composition according to Claim 5, wherein said n is an integer ranging from 1 to 5.
 - 64. A composition according to Claim 5, wherein said n is equal to zero.
- 65. A composition according to Claim 1, wherein said composition has a hardness ranging from 20 g to 2000 g.
- 66. A composition according to Claim 65, wherein said composition has a hardness ranging from 20 g to 900 g.
- 67. A composition according to Claim 66, wherein said composition has a hardness ranging from 20 g to 600 g.
- 68. A cosmetic process for caring for, making up or treating a keratin material comprising the application to at least one keratinous material of a cosmetic composition comprising:
- (a) at least one liquid fatty phase comprising:
- (i) at least one structuring polymer comprising a polyamide skeleton which comprises at least one end group with at least one chain chosen from alkyl chains comprising at least four carbon atoms and alkenyl chains comprising at least four carbon atoms, bonded to the skeleton via at least one ester group; and
- (ii) at least one amphiphilic compound which is liquid at room temperature and which has an HLB value of less than 8.
- 69. A process of structuring a liquid fatty phase in the form of a self-supporting solid comprising including in said at least one liquid fatty phase a sufficient amount of (i) at

least one structuring polymer comprising a polyamide skeleton which comprises at least one end group with at least one chain chosen from alkyl chains comprising at least 4 carbon atoms and alkenyl chains comprising at least 4 carbon atoms, bonded to said polyamide skeleton via at least one ester group, and (ii) at least one amphiphilic compound which is liquid at room temperature having an HLB value of less than 8; and wherein said self-supporting solid is obtained.

- 70. A process according to Claim 69, wherein said self-supporting solid has a hardness ranging from 20 g to 2000 g.
- 71. A process according to Claim 70, wherein said self-supporting solid has a hardness ranging from 20 g to 900 g.
- 72. A process according to Claim 71, wherein said self-supporting solid has a hardness ranging from 20 g to 600 g.
- 73. A process of structuring at least one liquid fatty phase in the form of a glossy and/or nonmigrating solid comprising combining with said at least one liquid fatty phase a sufficient amount of (i) at least one structuring polymer comprising a polyamide skeleton which comprises at least one end group with at least one chain chosen from alkyl chains comprising at least four carbon atoms and alkenyl chains comprising at least four carbon atoms, bonded to said polyamide skeleton via at least one ester group, and (ii) at least one amphiphilic compound which is liquid at room temperature having an HLB value of less than 8;

wherein said glossy and/or nonmigrating solid is obtained.

74. A process of structuring a cosmetic composition in the form of a physiologically acceptable composition which is glossy and/or nonmigrating comprising including in said composition at least one liquid fatty phase, said at least one liquid fatty phase being structured with at least one structuring polymer which comprises a polyamide skeleton comprising at least one end group with at least one chain chosen from alkyl chains comprising from 4 to 22 carbon atoms and alkenyl chains comprising from 4 to 22 carbon atoms, bonded to said polyamide skeleton via at least one ester group and (ii) at least one amphiphilic compound having an HLB value of less than 8;

wherein said glossy and/or nonmigrating cosmetic composition is obtained.

75. A process of making a cosmetic composition in the form of a physiologically acceptable composition which is glossy and/or nonmigrating comprising including in said composition at least one liquid fatty phase, said at least one liquid fatty phase being structured with at least one structuring polymer which comprises a polyamide skeleton comprising at least one end group with at least one chain chosen from alkyl chains comprising from 4 to 22 carbon atoms and alkenyl chains comprising from 4 to 22 carbon atoms, bonded to said polyamide skeleton via at least one ester group and (ii) at least one amphiphilic compound having an HLB value of less than 8;

wherein said glossy and/or nonmigrating cosmetic composition is obtained.